

Looks Like

Worms up to 1-3/4 inches long Tomato fruitworm
in immature or ripe tomatoes

Worms up to 3/8 inch long Potato tuberworm Do not plant tomatoes where
Tunneling in fruit potatoes were planted the year
year before. Destroy volunteer
Potato plants.

Worms never longer than Tomato pinworm Pinworm is most common in
1/4 inch tunnel in core and Southern California and the
fleshy parts radiating from central to Southern end of the
core. Leaves may be mined and San Joaquin Valley. It occurs
folded together. earlier in season than fruitworm.

Leaves eaten, stems remain. Hornworms
Fruit with small to large gouged Insects have distinctive
out areas. Very large cater pillars horn on rear end.
may be present.

Fruit surface eaten away or Snails feed on surface Stake tomatoes to get fruit off
fruit hollowed out of fruit. Slugs hollow ground and away from slugs
out fruit. and snails.

Creamy to yellowish cloudy Stink bugs. Green to Stink bugs overwinter beneath
spots lacking definite margin gray shield-shaped boards in weedy areas, refuse
on ripe tomatoes. Tissue bugs 1/4 inch long piles. Remove debris from garden
beneath the spots is spongy. area. Hand pick egg masses and
bugs. Weed control.

Looks Like

Leaves almost totally eaten off **Vegetable weevil** Weevil attacks many vegetables
of young plants. Small dark but does not fly so it spreads
weevils on plants. Slowly through garden. Hand-
picking adults off plants at
night is effective if population
is low. Rotenone is effective

Lower leaves, stems have **Tomato russet mite** Do not grow tomatoes near
bronze, oily brown color. Very tiny mites not petunias or any solanaceous
Discoloration moves higher visible to naked eye. plant such as potato
on plant. Dry lower leaves Use 20 power hand because they are
drop from plant or plant lens. Mites appear alternate hosts of the
may lose leaves. as whitish-yellow russet mite. Sulfur is
pear-shaped bodies effective, but excessive
moving slowly. rates may injure plant.

Leaves yellowish, slightly **Aphids** Not a problem unless honeydew
curled. Some leaves and fruit Tiny, oval, yellowish or sooty mold becomes obvious
with small shiny spots. Others to greenish scale-like Can use insecticidal soap.
may appear blackened. Clouds bodies
of small white insects fly up
when plant is disturbed. Insects
visible on undersides of leaves.

Seedlings or small transplants **Flea beetles** Rarely damaging except on
with small holes in leaves. In seedlings. Tomatoes tolerate a
severe cases, entire plants may lot of beetle damage if they are
be completely destroyed. healthy.

Plants with poor vigor, reduced **Root knot nematode** Plant varieties resistant to root
yields. Foliage yellows, turns Nearly microscopic knot nematodes. Such varieties
brown from bottom up. May look eelworms which attack are labeled VFN, referring to

wilted. Many beads or swellings feeder roots. resistance to *Verticillium wilt*, on roots. *Fusarium* wilt, and nematodes.
Rotate. Remove old plant debris.

Looks Like

Blossoms fall off Night temperatures Fertilize properly. Do not plant

too low (<55° F) too early. Hormone sprays can improve fruit set during low temperatures but will not help in high temperatures.

Day temperatures Keep soil moderately moist.

too high (>90° F)

Smog during Tapping on blossom stems blossoming period 3 times per week in midday when flowers are open may help set fruit.

Excess nitrogen fertilizer

Too much shade Plant tomatoes in full sun. from trees, house

Susceptible variety Some varieties are not adapted to California's hot summers and these often fail to set fruit.

Early blossoms Early blossoms do not consistently set fruit.

Leaf veins turn purple and Curly top virus After plants are infected, no bronze. Leaves curl upward, Disease is spread by practical control in the home feel thick, leathery, or brittle. leafhoppers. garden.

Plant growth stops. Fruit ripen prematurely. Purple leaves can also indicate phosphorus deficiency

Leaves have irregular light and Mosaic virus Plant tobacco mosaic virus (TMV) dark green color pattern. May resistant varieties. Do not handle

be wrinkled or frilly. Terminal plants more than necessary. growth may be spindly with Plant tomato seeds rather than narrow, wrinkled leaves. transplants. Do not smoke and handle plants since TMV can be spread in tobacco. No cure for virus in infected plants. Infected plants produce edible fruit but yield, size, and quality and

reduced.

Looks Like

Plants pale, turning yellowish Spotted wilt virus Remove and destroy infected with brown lesions on leaves. Disease is spread plants. Control nearby weeds Brown stripes on some stems. by thrips from that can harbor virus or thrips. Fruit poorly colored with various crops, vector circular light areas or ornamentals, distorted bumps. Plants weeds.

eventually die.

Plants turn yellow starting Fusarium wilt Grow varieties labeled VF. They with one side or branch and Disease is caused have resistance to most (but not gradually spreading. Main by a soil fungus that all) races of *Fusarium*.

stem when cut off at base is infects tomatoes only.

dark reddish brown instead of Favored by warm soil

normal ivory color. Wilt.

Older leaves begin to yellow Verticillium wilt Grow varieties labeled VF. Avoid and eventually die. Yellowing Disease is caused by ground previously planted with begins between main veins of a soil fungus that tomatoes, potatoes, peppers, leaves. Internal stem is infects many plants eggplant or cucurbits. Symptoms very slightly tan-colored, Favored by cool most severe when plants are usually in small patches. soil and air temps. water-stressed in hot weather with fruit load.

Plants grow slowly and wilt. Phytophthora root rot Most common in heavier clay

Roots have water-soaked areas Caused by a soil soils. Irrigate affected plants

that turn brown and dry up. fungus carefully to maintain them. Do

not saturate soil for extended

periods and water more

frequently for short periods.

Plants wilt with white cottony Southern blight Rotate to corn or other nonhost

growth on stem near soil line. Caused by *Sclerotium* crops for 2 to 3 years.

rolfsii

Fruit turns light brown, leathery Sunscald Caused by Maintain plant vigor to produce

on side exposed to the sun Overexposure to sun adequate leaf cover.

Water-soaked brown areas on Late blight Avoid sprinkler irrigation.

leaves and stems. Grayish white Caused by a fungus. Destroy all tomato and potato

fungus grows on undersides of Favored by high debris after harvest.

leaves and they die. humidity and temperatures

Fruit discolored but firm. around 68 °F.

Looks Like

Irregular yellow blotches on Powdery mildew Disease usually occurs late in

leaves. Blotches turn brown and Caused by a fungus summer or fall but does not

die but leaves usually do not drop, cause significant loss unless

unless disease is severe. very severe so no control

No symptoms on stem or fruit. normally needed. Avoid water

stress. If young plants attacked,

sulfur dust will control the

disease.

Dark brown to black blotches Bacterial speck Develops only under wet, cool

surrounded by yellowing along A disease caused by temperatures, usually in early

edges of leaves. Superficial a bacterium spring. Daily mean temps.

dark specks on green fruit. >70 °F suppress it. If speck is

a problem, consider delaying

planting until temps are warm.

Rotate. Avoid overhead

watering.

Fruits are brown-black on Blossom end rot Disease involves calcium

bottom (blossom) end. Affects A physiological nutrition and water balance in

both green and ripe fruit. disease plant. Aggravated by high soil

(not caused by salt content or low soil

a microorganism) moisture. More common on

sandier soils. Maintain even soil moisture.

Lower leaves yellow with tiny brown specks. Leaves die. Blossoms drop. Poor growth. diagnose accurately.

Fruit with large cracks in stem. rainfall or irrigation after a rain to prevent cracking. esp. after dry spell.

Fruit with large cracks radiating from stem. High temps. (>90° F) Keep soil evenly moist. Maintain High sunlight good leaf cover. In very hot regions, choose planting time to avoid fruit maturity when temps will be consistently

above 90° F.

Fruit with black mold along growth cracks. Develops above. Handle fruit carefully.

on damaged, cracked tissue

Looks Like

Black sunken spots on fruit Alternaria fruit rot Use registered fungicide

Tiny, white, winged insects Whiteflies Encourage beneficials on undersides of leaves

Trails, tunnels in leaves Leafminers Use insecticides, natural enemies to control

Young plants cut off at ground Cutworms Use cutworm collars or registered insecticide